

Date: Mon, 21 Jun 93 15:30:28 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #759
To: Info-Hams

Info-Hams Digest Mon, 21 Jun 93 Volume 93 : Issue 759

Today's Topics:

6 meters: Frequently Asked Questions
 Another FD Question
 Any readers from ZL out there??
 Belden 9913 Coax
 FD ARRL Section List
 FD Sections + 1
Ground rods (was:Making home HAM Friendly)
 Making home HAM Friendly
 Problems with Morse code tutor
 W6QIL - Silent Key
 Yaesu FT-5100/5200 mods, Rev D

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 21 Jun 93 17:00:39 GMT
From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!spool.mu.edu!
olivea!gossip.pyramid.com!pyramid!infx!moose!randall@network.UCSD.EDU
Subject: 6 meters: Frequently Asked Questions
To: info-hams@ucsd.edu

I have been working on a 6m FAQ. Comments, corrections, etc.
are welcome.

THE SIX METER AMATEUR RADIO BAND
FREQUENTLY ASKED QUESTIONS
(Designed to help encourage hams to use and enjoy this band!)

WHAT IS THE SIX-METER BAND? The 6 meter band is a portion of the RF spectrum allocated to amateur radio. The band usually behaves like a VHF band similar to 2 meters. During one of the rare F2 openings, propagation is more like an HF band such as 10 meters. The band is fun and fascinating because just about all types of propagation pop up on 6m at one time or another. The band is an acquired taste: a few hams work the band regularly, but most hams never work it at all. Once you acquire the taste, you tend to be hooked for life. The band has become more popular in recent years with the help of greater availability of better rigs. There two types of 6m operators: the ones who use FM or packet for local work, and ones who work DX with SSB. (Some like me even do both!)

WHAT ARE THE FREQUENCIES? In the U.S. and some other countries, the six-meter amateur radio band lies between 50 and 54 MHz, just below TV channel 2 in the U.S. In some other countries, 6m is allocated much less bandwidth. New Zealand's band starts at 51.0. Check your allocations for your particular country. They change pretty often as the band is becoming more popular.

WAS 6M ONCE TV CHANNEL ONE? Televisions in the U.S. start at channel 2. Some ham books say that 6m was once channel 1. This is not true. Just after WWII, Channel 1 in the U.S. was allocated 44 to 50 MHz, with 6m occupying the same spot as it does today. By 1948, interference from police radios and hams made channel 1 nearly unusable. Early TV sets had little or no RF sheilding. The ARRL recommended that channel 2 (54-60 MHz) be eliminated, but the FCC decided to axe channel 1 instead.

IS FM USED ON 6M? Yes, but not that often in most areas. Most 6m enthusiasts use only SSB and sometimes CW. The main FM simplex frequency is 52.525 MHz. Your local range is better on 6m with the same power and a similar antenna. If 2m is too crowded in your area, the FM portion of 6m may be just the solution you need.

ARE REPEATERS USED? There are a few 6m repeaters listed in the ARRL Repeater Directory, but some of them are not operational. This will depend on your area. The offset in the U.S. is usually one MHz. (e.g. 53.330 out, 52.330 in)

HOW DO I KNOW IF THERE IS AN OPENING? Of course, the best way is to check for an opening is to listen to 6m, especially for the beacons that are listed in the ARRL Repeater Directory.

Monitor 50.110 and 50.125 for SSB openings. You can also monitor 28.885 MHz, the "10 Meter VHF Liaison Frequency", where hams report VHF openings and schedule contacts. You'll hear some of those "pros" you see in QST like W5UN on that frequency.

WHAT ARE THE MOST POPULAR FREQUENCIES? Per the FCC, 50.0 to 50.1 is reserved for CW work in the U.S. Most operation is SSB. 50.100 is the most popular SSB DX frequency, and 50.100 to 50.124 should be used only for DX. Some hams tend to discourage (or flame) U.S. domestic stations from calling CQ in this "DX window". The other popular frequencies tend to vary from area to area, so the following is only a general guide for beginners: 50.125 is the U.S. domestic calling frequency, and most domestic SSB is found between 50.125 and 50.200. Only during hot F2 openings do you find SSB above 50.200.

DO I NEED A BEAM ANTENNA? If you want to work DX, yes. You can have fun with a vertical during openings, (I do with an Icom 726 in my car) but the pros use beams. Everyone is horizontally polarized, but cross-polarization doesn't matter for Es, F2, or Aurora. A few stations use 3-element beams, but a 4 or 5 element beam is so small that a LOT of people use them. Quite a few people have Cushcraft 6-element "Boomers". There are a few other big beams, and the lunatic fringe stacks them. For example, K6QXY has a stack of 4 six-meter beams, each with a 50ft (15m) boom. The higher the tower the better! I live in subdivision where no outdoor antennas are allowed, so I use a 2-element beam in the attic, and it works OK. I also use a vertical for local FM work. RG8 or RG213 is plenty good enough cable for most people. Antenna-mounted preamps are never needed.

IS 6M NOISY? External noise is fairly high at 50 MHz. It overrides the front-end noise figure on about all the rigs on the market today unless you have a LOT of cable loss or a VERY quiet location.

IS THERE PACKET WORK ON 6M? It depends on the area. Local packet work can be found in the higher frequency portions of the band. There has been very little DX packet work.

CAN I RUN RADIO-CONTROLLED EQUIPMENT USING 6M? This is legal in the U.S. for licensed hams. Check the ARRL Repeater Directory for suggested frequencies.

WHAT ARE "GRID SQUARES"? On VHF and up bands, the world has been divided in 1-degree lat x 2-degree long "squares" which start at the south pole and date line and "read right

up". SSB stations will always identify their grid square along with their call sign, e.g. "KK6MY DM87". Each square is also divided into sub-squares. European stations like the subsquares; most US stations don't even know their own. In any case, the "squares" and their VUCC awards have been a wonderful interest builder, and have kept the QSL printers in business! Check the ARRL Operating Manual for a map of the grid squares.

WHAT RIGS ARE USED? Probably 50% of the active stations have 80 to 150 W output, either from old Icom 551D s (the 551 is 10W), or from solid-state (brick) amplifiers following the many types of 10W rigs, such as the Yaesu Ft-620B or the Kenwood TS-600. The Icom 575H is very popular, as it has an excellent receiver and 100 watts (the 575A is 10 watts). HF rigs that add 6m (such as the Icom 726) are usable but not as good as radios designed for 6m, especially in the receivers. Perhaps 40% of the stations run just 10 to 20 W, but most of them either get an amplifier or drop out after a year or so. The remaining 10% have tube rigs such as the Drake TR-6. Good 6m rigs tend to be expensive, even on the used market. Swan and Heathkit tube rigs are the least expensive and can be quite usable, but you will run into problems typical of older rigs, such as drift (especially on the Swan). The kilowatt is quite rare on 6m. The norm for serious stations is 100 to 150 watts.

CAN I USE A TRANSVERTER WITH AN HF RIG TO GET ON 6M? Yes, but you will either spend a lot of time tinkering with a soldering iron, or you will spend a lot of money on the high-end transverters from SSB Electronics. An SSB Electronics 6m transverter fully equipped will run you \$800, but may outperform most of the VHF all-mode rigs. (or so SSB Electronics claims) Some hams build transverters, but you need a good level of electronics expertise.

I LISTEN TO 6M OCCASIONALLY, BUT I NEVER HEAR ANYONE. Openings on 6m are rare, especially during low points in the sunspot cycle. For hams in far northern latitudes (say 50 degrees and above), aurora openings are common. The most common openings in middle and southern latitudes are a result of sporadic E (Es), which occurs most often in June. F2 openings occur only when the solar flux is high. An explanation of the many types of propagation on 6m follows.

HOW OFTEN ARE THERE F2 OPENINGS? F2 propagation, the kind that we know and love on 20 meters, occurs rarely on 6m. Only at the peak times of the sunspot cycle, a few years out of each eleven, does the band open up for F2. When it does happen, the band becomes a frenzy of activity, and

behaves similar to 10 meters. In the last cycle, there were many openings in 1989 through 1991, but that cycle had an unusually long period of peak activity. Openings occur most often in Autumn during the daytime. A few stations have worked 100 or more countries, but they have been patiently working the fleeting openings for many years. The March, 1993 QST magazine has an excellent article on 6m propagation that shows a correlation between solar flux and openings.

HOW IS TROPO PROPAGATION ON 6M? The ordinary ground-wave tropo range on six isn't quite as great as on two. There are a number of reasons. Since there are so many other propagation modes on six, people don't try so hard on tropo. Antenna gain often is higher on two. Noise is lower on two. At least in the summer, stations like W3BWU (Pittsburgh), W3IDZ (northern NJ) are easily worked from Maryland with the beam pointing at them, and can be heard at almost any pointing. They are in the 150-W class.

HOW IS METEOR PROPAGATION? Any area workable by meteors can be worked more easily by Es or aurora. Even though meteor bursts are much stronger and longer on six than on two, little use has been made of them. There has been a VERY little meteor-burst packet work on six. W3OTC had the first such contact (with W0RPK). W3XO worked him a few years later.

WHAT ABOUT IONOSCATTER? Some people think it's really meteors, but every weekend morning there are a number of nearly-kilowatt stations working each other on SSB at distances of about 600 - 1000 miles by ionospheric scatter. Sigs are weak, and it takes good beams, height, and power, but it is very reliable. See the old NBS papers by Bailey, Bateman and Kirby, et al. Bateman and Kirby were/are hams. Ross Bateman recently died. Dick Kirby continues as head of ITU in Geneva.

HOW IS AURORA? It is much easier than on two. SSB is usually intelligible. Point north about dusk, most commonly in March and October/November. Lots of people in the far northern latitudes work this mode when it happens.

WHAT ABOUT SPORATIC E (Es)? Es is the most common propagation mode on 6m. The term "sporadic" is accurate: stations can pop in and out and then fade quickly. I would monitor 50.110, 50.125, and 28.885 MHz to check for Es. Es has little or nothing to do with the sunspot cycle; it is much more a function of the time of year. Es is most common in June, but can appear from May to August, and around

Christmas, here in northern latitudes. In addition to the common single-hop range of 500 - 1500 miles, there are quite a few double- and-more hop contacts on 6m. Now that a number of Europeans are on six, we find that they can be worked from the US east coast each summer. Likewise the Caribbean stations work all over the US. The US west coast can work Hawaii, Alaska, and Mexico. You will also hear some hams on June DXpedition trips to Mexico and the Caribbean; they are easy to work in the late afternoon or early evening, even with 10W and a vertical. The VHF contest in the middle of June is also a good time to work Es.

WHAT ABOUT TRANSEQUATORIAL PROPAGATION? - The southern US gets a number of openings to South America by some kind of ionospherically-ducted propagation. The stations are generally about equidistant either side of the magnetic equator. Given exceptional luck, an Es opening linked into this mode can make it available to more northern stations. This mode has bad flutter fading and a touch of the auroral spectrum spreading. This mode also works sometimes on two meters if you use CW and really good gear. It has been worked on 432 MHz.

ANY MOONBOUNCE (EME)? - There have been a few EME contacts on six, but the required antenna size and high background noise makes it out of the reach of most people.

WHAT ABOUT TVI PROBLEMS? There is no doubt about it, six has TVI troubles. You don't find a lot of people on 6m in channel 2 areas unless cable is widely subscribed-to. VCRs are very prone to 6m pickup. Cordless phones, baby monitors, and kiddie walkie-talkies operate on 49 MHz. Most consumer electronic equipment has poor RFI shielding. The common connecting or power cable is a quarter-wave antenna for six. The TV owners have their revenge since the 13th harmonic of the color subcarrier, or something, of TV sets and TV games puts out a birdy at 50.113 MHz to bother the 6m operators in return. There is also quite a bit of trouble from noisy power distribution lines if they aren't buried (usually bad insulators or poor guy bonding).

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Randall Rhea	Informix Software, Inc.
Project Manager, MIS Sales/Marketing Systems	uunet!pyramid!infmx!randall

Date: 21 Jun 93 20:13:43 GMT
From: walter!porthos!prefect!mgsail@RUTGERS.EDU
Subject: Another FD Question
To: info-hams@ucsd.edu

My home QTH is Northern NJ but I'll be operating Marine Mobile moving between Long Island and CT. What do I give as a "Section?"
Marv
N2OWL

Date: Mon, 21 Jun 93 20:30:45 GMT
From: usc!wupost!waikato.ac.nz!comp.vuw.ac.nz!zephyr.grace.cri.nz!
zephyr.grace.cri.nz!usenet@network.UCSD.EDU
Subject: Any readers from ZL out there??
To: info-hams@ucsd.edu

In my previous posting I listed the address of NZART Headquarters with a postal code. This seems to have caused a bit of confusion among a few people outside New Zealand, who were unaware that this country had taken on postal codes.

Sorry, I shouldn't have done that. The postal code will do you no good at all in sending a message. Postal codes have been in operation here for a number of years, but are only really effective when you are dealing directly with the postal company in the delivery of bulk mail.

The addition of postal codes has become a "habit" of mine. It does help sometimes, but not for inward overseas mail, which will be delivered with or without the code.

Sorry for the confusion (phew, thank goodness I got out of that mess...)

Stephen ZL4HG

+-----+
| Stephen McNeill |
| Image Processing Team Phone : +64-4-569 0226 |
| Landcare Research New Zealand Ltd FAX : +64-4-569 0746 |
| Box 38-491 Internet: srghsjm@gih.grace.cri.nz |
| Wellington Mail Centre Omnet : s.mcneill |
| New Zealand Packet : zl4hg @ zl4hg.wlg.nzl.oc |
+-----+

Date: 21 Jun 1993 20:48:43 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
darwin.sura.net!mojo.eng.umd.edu!chuck@network.UCSD.EDU
Subject: Belden 9913 Coax
To: info-hams@ucsd.edu

In article <930620130704_1@ccm.hf.intel.com> Cecil_A_Moore@ccm.hf.INTel.COM (Cecil A Moore) writes:

>>9913 has approximately 3db of loss per 100' at 330mhz.
>
>The ARRL Handbook says 2.3 db loss per 100' at 330 MHz and 3 db loss
>per 100' at 520 MHz. Which is correct? I just bought some for 440.
>Is 2.3 approximately 3 or is the Handbook wrong?

Well, probably both. The attenuation factor for coax increases with frequency. The attenuation at 440MHz will be somewhere between these two values.

73

Chuck Harris - WA3UQV
chuck@eng.umd.edu

Date: 21 Jun 93 16:15:02 EDT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
darwin.sura.net!udel!news.intercon.com!psinnntp!arrl.org@network.UCSD.EDU
Subject: FD ARRL Section List
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, levin@bbn.com (Joel B Levin) writes:
>adams@chuck.dallas.sgi.com (Charles Adams) writes:
>|hint: wanna increase your CW speed? work FD and SS. your code speed
>| will really go up in a hurry. get an Elmer and help them with logging
>| and dapping to start. requires earphones for both in most cases.
>
>|after this test you'll be copying morse from the shower, the fans, and lots
>|of background noise. ;-)
>
>Boy is this true. Every change int water flow, every buzz in the car
>engine sounds like a signal after a day of CW contest or FD operating.

Gee, isn't that evidence that contesting destroys your brain? :-)

(Dontcha just love flame bait?)

Jon Bloom, KE3Z

| jbbloom@arrl.org

American Radio Relay League |
225 Main St., Newington CT 06111 |

Date: Mon, 21 Jun 1993 22:03:47 GMT
From: pravda.sdsc.edu!news.cerf.net!usc!howland.reston.ans.net!darwin.sura.net!
sgiblab!sgigate!odin!chuck.dallas.sgi.com!adams@network.UCSD.EDU
Subject: FD Sections + 1
To: info-hams@ucsd.edu

Add to the VE sections YU (a.k.a. NWT) for VE8s. sorry about that
and my apologies to our northern neighbors in Canada.

73 es gl n t test de NTX 599 dit dit
--

"This is UNIX(tm)! I know this." - Lex in Jurassic Park in front of
SGI workstation.

Chuck Adams, K5FO - CW spoken here....70+ wpm
adams@sgi.com

Date: Mon, 21 Jun 1993 21:29:39 GMT
From: usc!elroy.jpl.nasa.gov!news.claremont.edu!jarthur.claremont.edu!
aross@network.UCSD.EDU
Subject: Ground rods (was:Making home HAM Friendly)
To: info-hams@ucsd.edu

Putting ground rods through or into concrete is a Bad Thing. I've heard
stories about concrete slabs (usually tower bases) that exploded when
lightning hit.

Andrew M. Ross

Date: Mon, 21 Jun 1993 17:50:15 GMT
From: netcon!bongo!julian@locus.ucla.edu
Subject: Making home HAM Friendly
To: info-hams@ucsd.edu

In article <C8z5s1.Jq5@hpmoca.sqf.hp.com> dstock@hpmoca.sqf.hp.com (David
Stockton) writes:
> (How do californians clean their cars ?)

They drive into the local car wash where they pay \$5-7 to have the car machine washed and vacuumed and dried by wetbacks who speak no English.

While waiting for their car to be washed, drivers get to buy tacky car accessories like car air fresheners and bumper stickers. Many car washes also have a shoe shine service.

Obhamradio: Remember to remove your roof antenna before entering the car wash, so the machine won't take it off for you.

--

Julian Macassey, N6ARE julian@bongo.tele.com Voice: (213) 653-4495
Paper Mail: 742 1/2 North Hayworth Avenue, Hollywood, California 90046-7142

Date: Mon, 21 Jun 1993 21:32:45 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
ux1.cso.uiuc.edu!newsrelay.iastate.edu!news.iastate.edu!bwehr@network.UCSD.EDU
Subject: Problems with Morse code tutor
To: info-hams@ucsd.edu

I have a problem with my morse code program. I own a Mac Classic II and am currently running system 7.1. The problem is that the tones on the program only emits clicks, no tones. The older Mac's seem to run the program with no problems but mine is definatley wrong! If anyone has any solutions please let me know.

Brant Wehr N0UTT

Iowa State University

bwehr@iastate.edu

Date: 21 Jun 93 22:20:49 GMT
From: news-mail-gateway@ucsd.edu
Subject: W6QIL - Silent Key
To: info-hams@ucsd.edu

Ray Furlong, W6QIL passed away 6/18/93. His wife found him slumped over in his easy chair.

Many remember Ray from his many years of support as a friend and an Elmer. He was 71 years old, but looked only 50 just a month ago. Ray had many activities and capabilities. To list a few that I know;

1. Lived in Long Beach
2. Taught electronics part time at El Camino College
3. Was in the Navy during WWII as a radio operator
4. Was a trustee of W6RO, the Queen Mary ham station
5. Could remember the call letters of every person that he met over his many years as a ham
6. Could send and receive CW at 65 WPM. Plus being able to write notes and carry on a conversation to the person next to him

I had known Ray since 1946 when we were members of the Inglewood Amateur Radio Club. At that time, we worked many field days together. What a pleasure it was to know him.

In addition to the above, he was a nice guy!

Hugh Wells W6WTU

Date: Mon, 21 Jun 1993 18:40:18 GMT
From: amdcad!amdcl2!brian@decwrl.dec.com
Subject: Yaesu FT-5100/5200 mods, Rev D
To: info-hams@ucsd.edu

I just "discovered" the following quirk of the 5100. It probably applies to the 5200 as well. If you've got a copy of the Rev D mods sheet that I posted last week, this is in the same format...

Brian

Dual 2m receive oddity:

Effect: Receive's 2m frequency in wrong place

When the 5100 is dual receive mode with two 2 meter frequencies displayed, it will receive a strong 2m signal at both the correct frequency (f) and at (292MHz - f). For example, the 146.78 repeater will be heard at 145.22MHz. This "image" can be received on both the main and the sub band

tuner. If both the true and the image frequencies are tuned simultaneously, they will interfere with each other (ie. they are very close to 180 degrees out of phase).

Attributed: brian.mcminn@amd.com (Brian McMin)

Date: Mon, 21 Jun 1993 19:46:17 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!news.ucdavis.edu!othello.ucdavis.edu!
ez006683@network.UCSD.EDU
To: info-hams@ucsd.edu

References <9306192035.AA01270@ucsd.edu>, <1993Jun21.123648.21165@ke4zv.uucp>,
<204n45INN8ii@topaz.bds.com>006683
Subject : Re: TV vs Cable. Why Pay for a FREE Signal

Ron Natalie (ron@topaz.bds.com) wrote:

: That's a point of view. I'm sure the cable companies view it as providing
: the broadcaster an opportunity to expand his audience to people who don't
: have access to decent antenna systems. Frankly, I don't think it's going
: to be the CATV who are going to suffer if they decide to drop broadcast
: stations rather than have these fees extorted from them. It's not the
: broadcast stations that are the money makers for them.

Does that mean the cable co's should not pay for anything that is not
scrambled or is in common key from the satellites? after all it is just
another antenna to pick up and rebroadcast the signal. And they are
providing the channels with a larger audience that would otherwise not
have access to the system.

Dan

--

* Daniel D. Todd Packet: KC6UUD@WA6RDH.#nocal.ca.usa *
* Internet: DDTODD@ucdavis.edu *
* Snail Mail: 1750 Hanover #102 *
* Davis CA 95616 *

* I do not speak for the University of California.... *
* and it sure as hell doesn't speak for me!! *

Date: Mon, 21 Jun 1993 17:44:43 GMT
From: netcon!bongo!julian@locus.ucla.edu
To: info-hams@ucsd.edu

References <9306192035.AA01270@ucsd.edu>, <1993Jun21.123648.21165@ke4zv.uucp>,
<204ep8INNajo@rave.larc.nasa.gov>v
Subject : Re: TV vs Cable. Why Pay for a FREE Signal

In article <204ep8INNajo@rave.larc.nasa.gov> kludge@grissom.larc.nasa.gov (Scott Dorsey) writes:

>In article <1993Jun21.123648.21165@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman) writes:

>>

>>Cable subscribers are *already* paying for what others receive for
>>free.

>

>Why bother paying for cable TV? Around here, it leaks out of the cable
>badly enough that you can pick it up on a cable-ready TV set with a good
>antenna. Not to mention that you can also pick it up on your 2M rig or
>an aircraft radio.

Why do people pay to watch all those Soloflex and "Amazing Discoveries" infomercials? They alone prove that Cable TV has few redeeming values.

And now they tell us we can have 150 channels! Wow!, we will move from 3 simultaneous Soloflex infomercials to 12 simultaneous Soloflex infomercials. Makes you want to tune to 14.313 for some intellectual stimulation.

--

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End of Info-Hams Digest V93 #759
